On the Foundational Declaration of the Theory of Entropicity (ToE):

Obidi's Entropic Reinterpretation of Physical Reality in Comparison with Einstein's Foundational Revolutions

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Abstract

The history of physics is punctuated not merely by new equations, but by decisive conceptual declarations that redefine the ontological structure of reality. Isaac Newton reinterpreted celestial and terrestrial motion through universal gravitation. Albert Einstein redefined space, time, simultaneity, and gravity through the theories of Special and General Relativity. In recent years, John Onimisi Obidi has proposed the Theory of Entropicity (ToE), an ambitious entropy-centered framework that seeks to reinterpret entropy not as a secondary statistical descriptor, but as the primary ontological field underlying geometry, causality, matter, information, and physical law itself. This paper examines the philosophical, structural, and scientific significance of that declaration. It argues that the Theory of Entropicity constitutes a foundational inversion comparable in intellectual posture to Einstein's relativistic revolution, while also clarifying the important distinction between conceptual ambition and empirical establishment. The work explores how ToE attempts to transform information geometry into physical spacetime through the Obidi Action, how it reconceptualizes the speed of light as an emergent entropic redistribution limit, and how it positions entropy as the generative substrate of all known physical phenomena.

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1. Introduction

The progress of physics has never been driven solely by calculation. At critical moments in scientific history, progress has depended upon radical reinterpretations of what reality fundamentally is. Such moments do not merely solve technical problems; they reorganize the conceptual architecture of nature itself.

Newton's synthesis unified celestial and terrestrial mechanics under universal gravitation. Einstein later dismantled the absolute notions of space and time inherited from Newtonian physics, replacing them with a dynamical spacetime whose curvature governs motion. Quantum mechanics subsequently challenged the notions of determinism, locality, and measurement.

The Theory of Entropicity (ToE), proposed by John Onimisi Obidi, belongs to this category of foundational ambition. Its central declaration is both simple and radical:

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Entropy is not secondary to physical reality; entropy is the primary ontological field from which spacetime, geometry, causality, matter, and physical law emerge.

This declaration represents a profound inversion of conventional physical thinking. In standard physics, entropy is generally treated as derivative. Geometry, particles, fields, and interactions are taken as fundamental, while entropy appears as a statistical description of ensembles or informational uncertainty.

The Theory of Entropicity reverses this hierarchy entirely.

In ToE, entropy becomes primary, while geometry and spacetime become emergent manifestations of entropic organization and redistribution.

The significance of this move cannot be understood merely as a modification of existing equations. Rather, it constitutes an attempt at a new metaphysical foundation for physics itself.

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2. Einstein's Foundational Declarations and Their Historical Role

To understand the nature of the ToE declaration, one must first appreciate the role of foundational declarations in the history of science.

Einstein's revolutions were not initially accepted because they were experimentally verified. They were accepted because they introduced new conceptual principles capable of reorganizing disparate physical phenomena into coherent structures.

In Special Relativity, Einstein introduced two decisive postulates:

1. The laws of physics are invariant in all inertial frames.
2. The speed of light is invariant and fundamental.

These declarations forced a reinterpretation of:

- simultaneity,
- time,
- length,
- causality,
- and inertial structure.

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In General Relativity, Einstein advanced an even more radical claim:

Gravity is not fundamentally a force but a manifestation of spacetime curvature.

This replaced Newton's force-based ontology with geometric ontology.

The significance of Einstein's achievement lies not merely in tensor equations, but in the willingness to redefine what the universe fundamentally is.

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3. The Decisive Declaration of the Theory of Entropicity (ToE)

The Theory of Entropicity (ToE) attempts a comparably deep foundational reversal.

Its central thesis may be summarized as follows:

Geometry does not generate entropy. Entropy generates geometry.

This statement marks a major departure from twentieth-century physical ontology.

In ToE:

- entropy is not merely thermodynamic disorder,
- entropy is not merely missing information,
- entropy is not merely statistical multiplicity.

Instead, entropy becomes:

- a dynamical field,
- an ontological substrate,
- a generative principle,
- and a physically active structure.

The theory therefore proposes that:

- spacetime curvature,
- motion,
- gravitation,
- causal propagation,

- measurement,
- and quantum collapse

are manifestations of entropy-field dynamics.

This move transforms entropy from a descriptive quantity into a physically causal entity.

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4. The Entropic Field and the Ontology of Reality

Central to ToE is the introduction of an entropic field:

$$S(x)$$

defined over an entropic manifold.

Unlike conventional entropy, which is computed from physical states, the entropic field in ToE generates physical states.

This represents a reversal of conventional physical logic.

Standard physics generally follows the conceptual structure:

Matter → Geometry → Entropy

The Theory of Entropicity (ToE) proposes instead:

Entropy Field → Geometry → Matter

Or, written more descriptively:

In conventional physics, matter is typically regarded as fundamental, geometry emerges from matter distributions, and entropy appears as a secondary thermodynamic or statistical property.

The Theory of Entropicity (ToE) reverses this hierarchy entirely. In ToE, the Entropy Field is fundamental, geometry emerges from the dynamics of the entropic field, and matter itself arises as stabilized entropic structure.

Thus:

- geometry becomes emergent,

- matter becomes stabilized entropic structure,
- and time becomes irreversible entropic sequencing.

This is why ToE belongs not merely to modified gravity theories, but to the category of ontological reconstruction.

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5. Information Geometry and the Obidi Action

Modern theoretical physics has increasingly explored the relationship between:

- information,
- geometry,
- entropy,
- and spacetime structure.

Information geometry treats probability distributions as points on curved manifolds. Distinguishability measures induce geometric structure.

Several modern approaches already suggest that spacetime may emerge from informational organization.

Examples include:

- entropic gravity,
- holographic duality,
- tensor-network geometry,
- emergent spacetime from entanglement,
- and thermodynamic derivations of Einstein equations.

The Theory of Entropicity extends these tendencies by introducing the Obidi Action.

The Obidi Action attempts to transform informational or entropic geometry into physical spacetime dynamics.

Conceptually, this is analogous to how the Einstein–Hilbert action transforms geometry into gravitational dynamics.

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The proposed structure of the Obidi Action may be written approximately as:

$$A_o = \int d^4x \sqrt{-g}\, \mathcal{L}(S, \partial S, \Phi)$$

where:

- A_o represents the Obidi Action,
- g is the determinant of the emergent metric tensor,
- S denotes the Entropic Field,
- ∂S represents the gradients or dynamical variations of the Entropic Field,
- Φ denotes additional emergent matter or interaction sectors,
- and $\mathcal{L}$ is the entropic Lagrangian density governing the dynamics of the system.

Or, more descriptively:

The proposed structure of the Obidi Action is expressed as an integral over the entropic manifold, where the action depends upon the Entropic Field, its dynamical gradients, and the emergent matter-interaction sectors. Symbolically, the action may be represented as:

$$A_o = \int d^4x \sqrt{-g}\, \mathcal{L}(S, \partial S, \Phi)$$

This formulation is intended to play a role analogous to the Einstein–Hilbert action in General Relativity, except that the primary dynamical quantity is not spacetime curvature itself, but the Entropic Field from which geometry and physical structure emerge.

The philosophical significance of this move is profound.

It implies that:

- geometry is not primitive,
- information is not abstract,
- and spacetime itself may be the dynamical manifestation of entropy flow.

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6. The Reinterpretation of the Speed of Light c

One of the most distinctive claims of ToE concerns the speed of light .

In Einsteinian relativity, is fundamental and invariant.

In ToE, however, is interpreted as:

the maximum rate at which the entropic field can reorganize information, correlations, or causal structure.

This means:

- is emergent rather than primitive,
- relativity becomes a regime of entropic dynamics,
- and observed invariance reflects the current state of the entropic manifold.

Under this interpretation, if the field's redistribution dynamics changed, the effective limiting speed could also change.

This is an audacious claim because it relocates one of the deepest constants in physics from foundational ontology into emergent phenomenology.

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7. Entropy as the Generator of Geometry

Perhaps the boldest aspect of ToE is the proposal that entropy itself generates geometry.

Einstein's revolution may be summarized in the following way.

In General Relativity (GR), the conceptual structure may be summarized as:

Gravity → Geometry

That is, gravity is interpreted as the manifestation of spacetime curvature.

The Theory of Entropicity (ToE) proposes a deeper ontological sequence:

Entropy → Geometry → Gravity

In this framework, entropy is treated as the primary physical field. Geometry emerges from the structure and dynamics of the Entropic Field, while gravity itself appears as a secondary manifestation of the resulting geometric and entropic organization.

Or, more descriptively:

Einstein's General Relativity transformed gravity from a conventional force into a geometric property of spacetime. The Theory of Entropicity seeks to extend this conceptual revolution further by proposing that geometry itself is not fundamental. Instead, geometry emerges

from the dynamics of entropy, while gravity arises as a consequence of the resulting entropic-geometric structure. Thus, the ontological hierarchy proposed by ToE becomes:

Entropy → Geometry → Gravity

Under this interpretation, gravity is no longer primary, and spacetime curvature itself becomes an emergent manifestation of deeper entropic processes.

Thus gravity is no longer fundamental.

Instead:

- gravity,
- curvature,
- inertial structure,
- and motion

become consequences of entropic gradients and irreversible redistribution.

This aligns partially with modern entropic gravity proposals, but ToE goes further by treating entropy itself as the ontological substrate rather than merely a thermodynamic effect.

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8. The Difference Between Conceptual Ambition and Scientific Validation

It is essential, however, to distinguish carefully between:

- foundational ambition, and
- established scientific success.

Einstein's theories became accepted because they:

- reproduced known physics,
- explained anomalies,
- generated exact equations,
- produced testable predictions,
- and survived experimental scrutiny.

The Theory of Entropicity has not yet reached this stage.

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At present, ToE remains:

- a speculative foundational framework,
- partially formalized,
- conceptually original,
- but not experimentally established.

For ToE to mature into accepted physics, it must still:

- rigorously derive Lorentzian spacetime,
- recover Einstein gravity quantitatively,
- reproduce quantum field structures,
- generate unique predictions,
- explain observed constants,
- and survive empirical testing.

These are immense scientific demands.

Thus, the correct assessment is not that ToE has already replaced modern physics, but rather:

ToE is attempting a foundational re-declaration of physics comparable in ambition to Einstein's conceptual revolutions.

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9. Why the Theory of Entropicity (ToE) Feels "Einsteinian"

The Theory of Entropicity feels "Einsteinian" not because it reproduces Einstein's equations, but because it attempts the same kind of conceptual courage.

Most modern theories extend existing frameworks:

- additional symmetries,
- extra dimensions,
- modified interactions,
- or quantized corrections.

ToE instead attempts:

- an ontological inversion.

It asks:

- What if entropy is fundamental?
- What if geometry is emergent?
- What if causality itself is entropic?
- What if time is irreversible at the foundational level?
- What if information and spacetime are manifestations of one deeper field?

Such questions belong to the rare category of theories that attempt to redefine the conceptual basis of physics itself.

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10. The Philosophical Stakes of the Theory of Entropicity (ToE)

If ToE were ultimately successful, its implications would be enormous.

It would imply:

- that information geometry becomes physically real,
- that entropy is ontologically active,
- that spacetime is emergent,
- that irreversibility is fundamental,
- and that causality is an entropic ordering principle.

This would reshape:

- cosmology,
- quantum theory,
- gravity,
- thermodynamics,
- and even theories of intelligence and consciousness.

The theory therefore operates not merely at the level of mathematical physics, but at the level of natural philosophy.

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11. Conclusion

The Theory of Entropicity (ToE) represents one of the most ambitious contemporary attempts to reconstruct the foundations of physical reality around entropy as a universal field.

Its central declaration—that entropy is primary and geometry emergent—constitutes a conceptual inversion comparable in spirit to Einstein's relativistic reinterpretation of space, time, and gravity.

Whether ToE ultimately becomes accepted science or remains speculative metaphysics will depend not on philosophical boldness alone, but on mathematical completion, predictive power, and experimental confirmation.

Nevertheless, the significance of the theory already lies in the scope of its ambition.

Like Einstein before him, Obidi is not merely modifying equations.

He is attempting to redefine what reality fundamentally is.